

2.0 Description of Alternatives

2.1 Introduction

This chapter describes the alternatives that were considered in the development of this EA and discusses alternatives that were considered but were eliminated from detailed analysis. The alternatives offer a hard look at the full range of possibilities available that will be analyzed further to make a decision on whether or not significant impacts will be associated with the Service's proposed action. Alternatives are different approaches that meet the purpose and need for the proposed action and must be identified and objectively evaluated.

The Service has developed a range of alternatives for this EA necessary to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a Finding of No Significant Impact (40 CFR § 1508.9). Informed by the scoping process, a range of alternatives was identified during the development of this EA. The alternatives include a decision to not expand the Refuge (no action), a decision to expand the Refuge and facilitate a land exchange for lands adjacent to the Refuge (proposed action), and decisions on whether or not to expand the Refuge and facilitate a land exchange for lands at another Refuge elsewhere in Colorado. These alternatives evaluate different scenarios that may accomplish the requirements that land be made available for transportation improvements to Indiana Street as well as provide the necessary real estate options to expand the Refuge.

Section 3174 of the Rocky Flats National Wildlife Refuge Act of 2001 (Public Law 107-107, 115 Stat. 1382) states that, upon receipt of an application meeting certain conditions, the Service must make land along the eastern boundary of Rocky Flats NWR available for the sole purpose of transportation improvements along Indiana Street. An application must meet the following conditions:

- Be submitted by any county, city, or political subdivision of the State of Colorado; and
- Include documentation demonstrating that the transportation improvements for which the land is to made available:
 - Are carried out so as to minimize adverse effects on the management of Rocky Flats as a National Wildlife Refuge; and
 - Are included in the regional transportation plan of the metropolitan planning organization designated for the Denver metropolitan area under 49 U.S.C. § 5303.

As described above in section 1.5, analysis of potential impacts associated with disposal of lands within 300 feet of Indiana Street was included as a part of the Refuge's 2004 EIS. The Service will not include deed restrictions or reversionary clauses as a condition of sale. However, language will be included as a part of any real estate transaction that is specific to the Rocky Flats Act, requiring that these lands must be used solely for transportation improvements.

2.2 Alternative A – No Change to the Administrative Boundary of the Refuge and Direct Sale of Transportation Corridor (No Action Alternative)

The No Action Alternative is included in the range of alternatives because it allows decision-makers to compare the magnitude of environmental effects of the action alternatives (i.e., Alternatives B, C, and D) against a benchmark. NEPA regulations require the inclusion of a no action alternative. The CEQ provides additional interpretation of the “no action alternative” requirement, stating that one option is to consider such an alternative as “no change” from current management guidelines (CEQ 1981). The Service has developed a no action alternative following these guidelines.

Under the No Action Alternative, there would be no change to existing management and the administrative boundary of the Refuge would be unchanged. The Service, as directed by Congress, would release Federal lands for disposal per the conditions set forth and purposes included in the Rocky Flats Act. Any future construction of transportation improvements occurring on these lands (which at this time is not well-defined) would be beyond the Service’s jurisdiction and would be regulated by appropriate Federal, State, and local agencies.

The Service would oversee a real estate transaction to sell up to 300 feet of the eastern boundary of the Refuge for its fair market value. In December 2010, the Service received an appraisal for a strip of land approximately 300 feet wide and approximately 2.76 miles long along the west side of Indiana Street between 120th Avenue and Jefferson County Road 4. The market value of the property, based on its highest and best use as a transportation corridor, is \$2,800,000 (Shannon & Lundquist 2010). The Service has no authority to retain any revenue received from this transaction. Any funds received from the land sale would be deposited into the U.S. Treasury (31 U.S.C. § 3302(b)).⁴ Under this alternative, the Service would sell these lands for \$2,800,000 or more to one or more entities for the purpose of transportation improvements along Indiana Street.

2.3 Alternative B – Expand the Administrative Boundary of the Refuge and Complete a Land Exchange for Holdings at the Refuge (Proposed Action)

Under this alternative, the Service would expand the Refuge by 617 acres into an area known as section 16.⁵ These lands are currently owned by the State of Colorado and managed as state trust lands⁶. The Refuge’s expanded boundary would exclude approximately 23 acres located in the northwest corner of

⁴ Known as the “miscellaneous receipts” statute, 31 U.S.C. 3302(b) provides “Except as provided in section 3718(b) of this title, an official or agent of the Government receiving money for the Government from any source shall deposit the money in the Treasury as soon as practicable without deduction for any charge or claim.” (GAO 2006).

⁵ The Public Land Survey System (PLSS) is a method used in the United States to survey and identify land parcels, particularly for titles and deeds of rural, wild or undeveloped land. Its basic units of area are the township and section. A section of land is one-square-mile block of land, containing 640 acres, or approximately one thirty-sixth of a township.

⁶ As a general rule, the Federal Government endowed sections 16 and 36 of each township to the State of Colorado. The Colorado State Land Board is responsible for management and stewardship of lands and minerals associated with these lands. Over 95% of these lands are part of the common school trust required to generate revenue for public education.

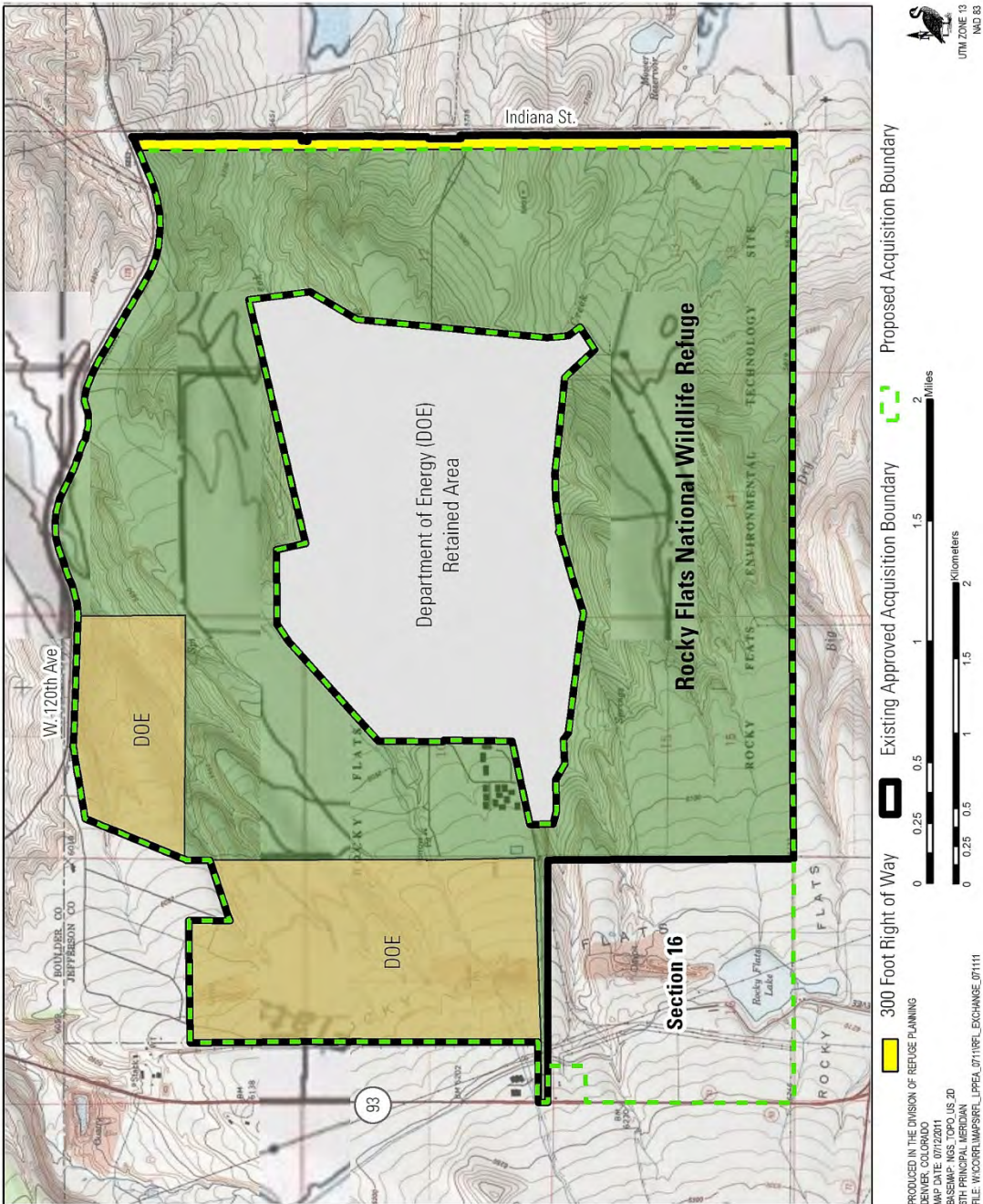
section 16 that have been affected by prior oil and gas development. Consistent with Service policy, all existing land acquisition methods would be available to add lands to the refuge system within the expanded boundary of the Refuge.

The administrative boundary of the Refuge encompasses 6,240 acres of Federal lands. The Service has accepted ownership of and management responsibility for approximately 3,953 of these acres. The DOE has retained approximately 1,308 acres within the center of the Refuge. This retained area is located in and around the past industrial area, which is required to maintain institutional controls and ongoing monitoring activities associated with the final clean-up remedy. In addition, the DOE desires to transfer an additional 644 acres once outstanding mineral rights are resolved to the Service's satisfaction. Rocky Flats is surrounded on three sides by designated open space. There are additional Federal and non-Federal lands immediately to the west of the Refuge that may be added to the Refuge System to increase habitat resiliency and connectivity.

Under this alternative, the Service would exchange the 300 feet of the eastern boundary of the Refuge for equal interests in lands found within section 16. This alternative is also described in the Draft Rocky Flats Land Protection Plan, included as Appendix I in this document. This alternative currently relates most directly to JPPHA's proposal that is described in Appendix F, but could easily apply to Golden or another party if they were to make arrange similar partnerships. All exchange proposals would include three parties (the applicant, the Service, and the owner of lands to be added to the Refuge). In this case, there would be a three-way transaction where: (1) the deed for the transportation corridor is transferred to the successful applicant; (2) the successful applicant provides funds to the Colorado State Land Board; and (3) the Colorado State Land Board provides a patent on lands within section 16 to the Service. The following policy guides this transfer

The Act of August 8, 1956 (Public Law 95-616, 70 Stat. 1122), known as the Fish and Wildlife Act of 1956, authorizes the Service to take such steps required for the development, advancement, management, conservation, and protection of fish and wildlife including land acquisition by purchase or exchange of land and water, or interests therein (16 U.S.C. § 742f(a)(4)). Service policy, 342 FW 5.7, provides criteria for land exchanges that include: (1) that the exchange be of benefit to the United States, and (2) that the value of the lands or interests in lands be approximately equal or that values may be equalized by the payment of cash by the grantor or by the United States. The Service Director must approve the acquisition of lands or interests by exchange when valued in excess of \$500,000 and such actions require the notification of Congressional committees holding jurisdiction.⁷

⁷ On April 14, 2008, the Service's Deputy Director amended language found in land acquisition policy chapter 342 FW 5.7D to reflect the new Congressional Exchange guidelines listed on page 191 of House Report 110-187, which explains the FY 2008 Department of the Interior, Environment, and Related Agencies portion of the FY 2008 Consolidated Appropriations Act (PL 110-161).



The present and proposed boundaries of Rocky Flats NWR.

Under this alternative, the Service would also use its land acquisition methods to complete acquisition of additional holdings within the expanded boundary of the Refuge. This may include the acceptance of donations, withdrawal of additional Federal interests, and necessary steps to secure outstanding mineral interests. The following policy guides these actions:

The Fish and Wildlife Act of 1956, allows the Service to accept gifts, devises, or bequests of real and personal property, or proceeds therefrom, or interests therein, when beneficial to its mission (16 U.S.C. § 742f(b)(1)).

As stated in the Refuge's 2004 EIS, a substantial portion of the mineral estate (subsurface mineral rights) associated with lands at the Rocky Flats NWR is privately owned or encumbered by leases. The Service does not believe it can manage the Refuge for the purposes included in section 3177(e)(2) of the Rocky Flats Act if certain mineral rights are exercised. The Service's 2004 EIS stated:

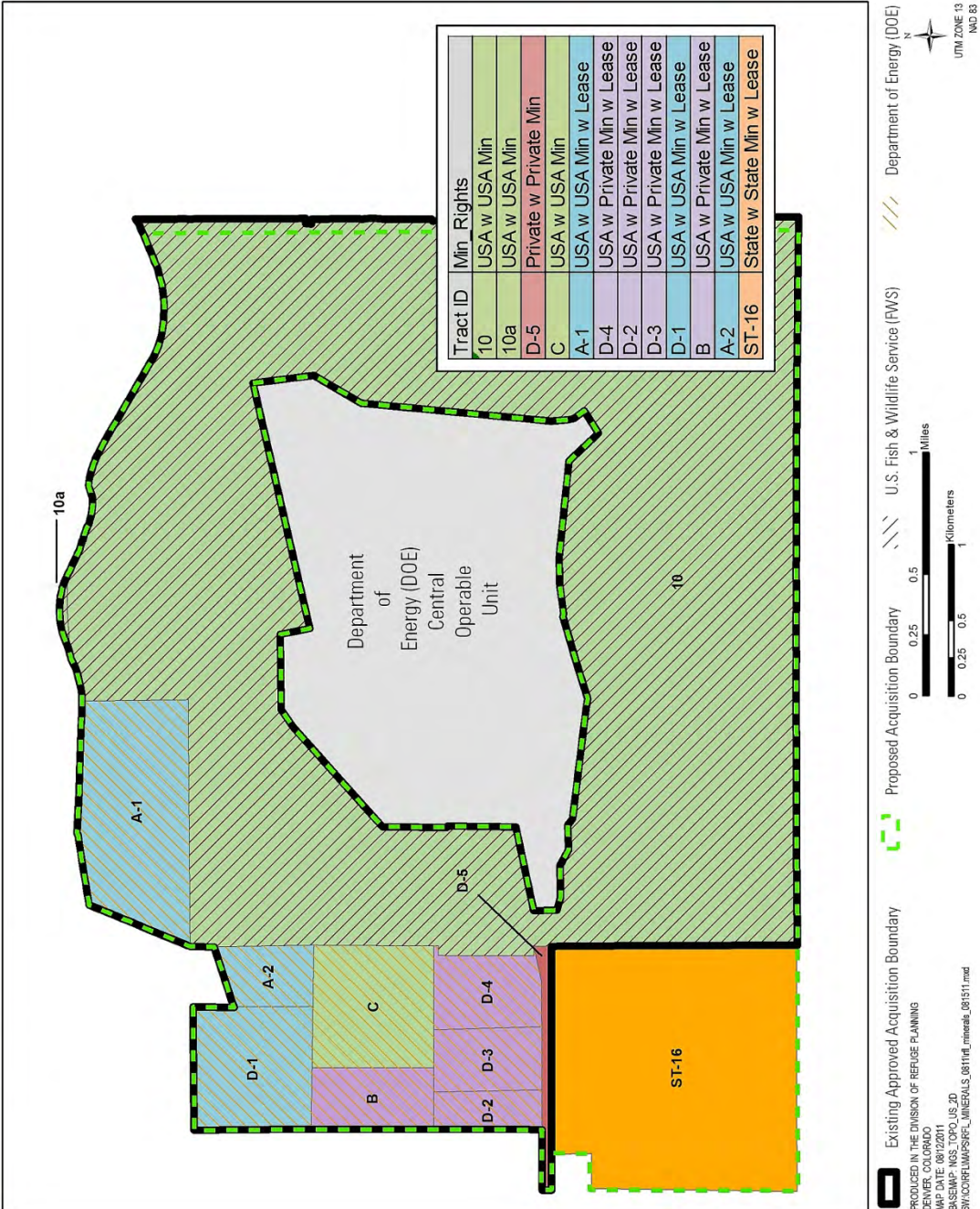
Accordingly, the Service will not accept transfer of administrative jurisdiction from DOE for lands subject to the mining of gravel and other aggregate material at Rocky Flats until the United States owns the mineral rights of the land to be transferred to the Service, or until the mined lands have been reclaimed to a mixed prairie grassland community (USFWS 2004a).

Under this alternative, the Service will continue its efforts to obtain all outstanding non-oil and gas mineral rights beneath the current and expanded Refuge boundary. Some of these areas have active surface disturbance from aggregate mining and others do not. The following is a description of mineral ownership and encumbrances beneath DOE lands within the current Refuge boundary:

- Section 4 – The United States currently owns the minerals beneath Parcels A-1, A-2, and D-1, totaling 478 acres. These minerals are currently leased through December 31, 2012. The lessor may request an extension to this lease.
- Section 9 – The United States currently owns the minerals beneath Parcel C, totaling 161 acres, with no encumbrances (ready for transfer to the Service). The minerals beneath Parcels B, D-2, D-3, and D4 are privately owned. Parcels B and D-2, totaling 127 acres, are currently leased. Parcels D-3 and D-4, totaling 164 acres, are currently leased and being actively mined for aggregate.
- The State-Federal Natural Resource Trustee Council⁸ for Rocky Flats has adopted a proposal to purchase aggregate mining leases on Parcels A-1, A-2, B, D-2, D-3, and D-4. This proposal is conditioned on the successful acquisition and transfer of private mineral rights to the United States.⁹

⁸ The term "trustees" means the Federal and State officials designated as trustees under section 107f(2) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9607f(2)). The purchase of essential mineral rights and eventual transfer of DOE lands is authorized by Section 3112 of the National Defense Authorization Act for Fiscal Year 2006 (Division C, Title XXXI of Public Law 109-163). Section 3112b(6) also exempts the purchase of outstanding mineral rights beneath Rocky Flats from the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321 et seq.).

⁹ Colorado Natural Resource Trustee Resolution 2011-7-19-11 was adopted on July 19, 2011.



Current surface and mineral estate ownership on and around Rocky Flats NWR.

PARCEL	APPROXIMATE AREA (ACRES)
A-1	262.31
A-2	61.11
B	80.61
C	160.54
D-1	154.89
D-2	46.12
D-3	75.66
D-4	87.86

Therefore, Alternative B includes a description of several possible real estate processes that could be used to expand the overall size of the Refuge and acquire essential mineral rights beneath the Refuge.

2.4 Alternative C – No Change to the Administrative Boundary of the Refuge and Complete a Land Exchange for Holdings at Other Refuges in Colorado

Under this alternative, the Service would make no change to the administrative boundary of the Refuge. The Service would use its existing exchange authority to acquire additional lands for the Refuge System within the State of Colorado. Similar to the exchange described under Alternative B, the Service would complete an exchange of lands to facilitate the sale of the 300 feet of the eastern boundary of the Refuge in exchange for equal interests in lands. This alternative relates to Golden’s proposal outlined in Appendix E. However, under this alternative, the exchange would be for lands at a unit of the Refuge System other than Rocky Flats NWR.

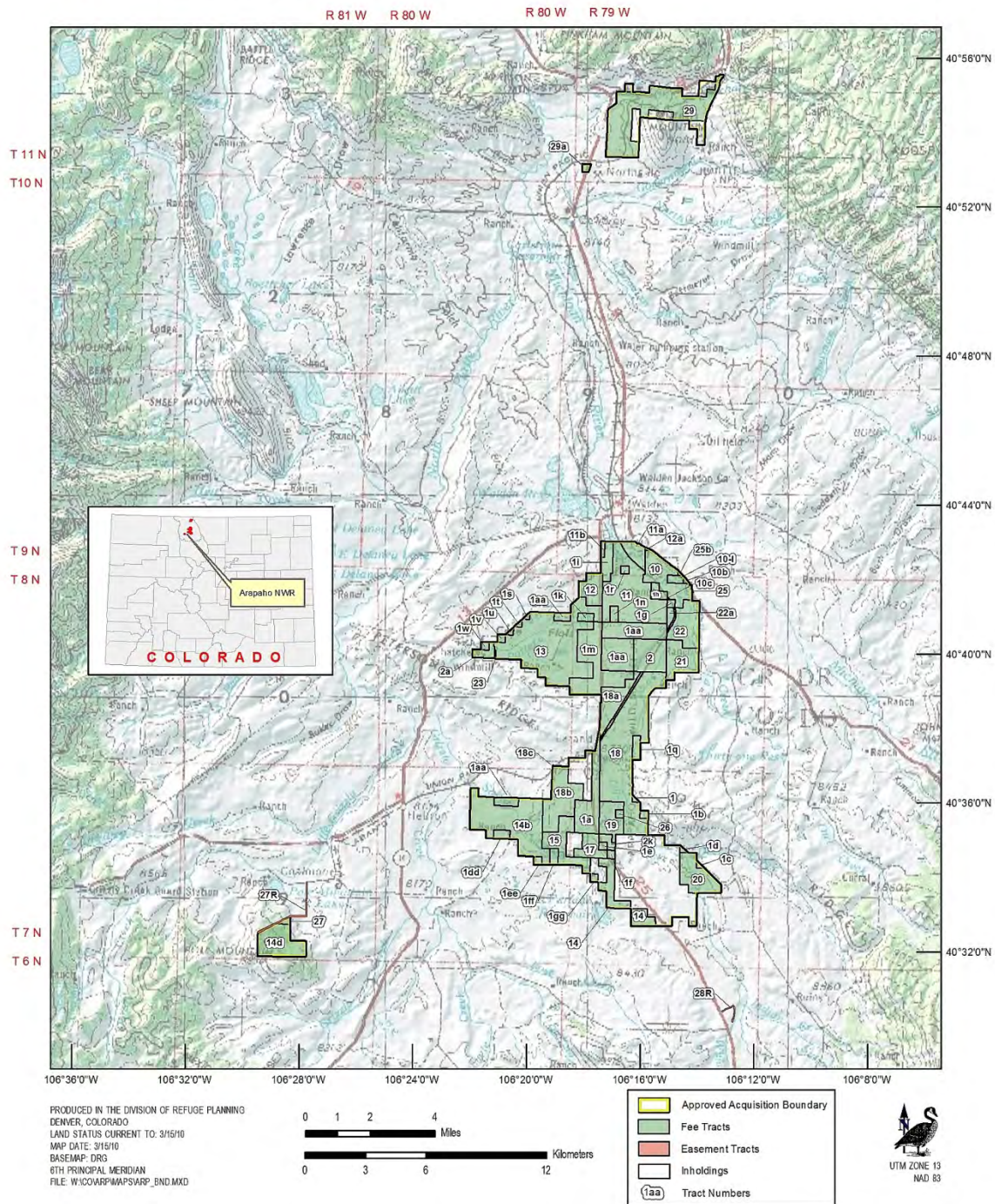
There are currently eight units of the Refuge System located in the State of Colorado. The Service has ongoing land acquisition programs at many of these units. Under this alternative, the Service would use its preexisting exchange authority to dispose of the transportation corridor and add lands to either the Arapaho NWR in Jackson County, Colorado, or the Baca NWR located in Alamosa and Saguache Counties, Colorado. Such a decision would be based upon a determination that no further land protection is required at the Refuge.

At the Arapaho NWR, near Walden, Colorado, a 3,687-acre inholding is available for purchase from a willing seller. The property is the largest remaining inholding within the Refuge’s acquisition boundary, and has an appraised value of \$7.1 million. The Trust for Public Land (TPL) has expressed its willingness to assist with this acquisition and has received a letter from the Service requesting their assistance. If this property is selected for an exchange under this alternative, a three-way exchange between the successful applicant, TPL, and the Service would provide for a portion of the inholding at Arapaho NWR. The TPL would locate another funding source for the remainder of the purchase price of the property, as the landowner is not willing to divide the tract.



U.S. Fish & Wildlife Service
Arapaho National Wildlife Refuge
Jackson County, Colorado

Land Status



Arapaho NWR including inholdings

At Baca NWR, near Moffat, Colorado, The Nature Conservancy (TNC) owns approximately 103,000 acres, known as the Zapata Ranch. A portion of the ranch is within the Refuge's acquisition boundary. TNC has expressed interest in conveying this property to the Service. The TNC property has not yet been appraised, however, the value of TNC land is likely to be closer to the \$2.8 - \$3.0 million value of the transportation corridor than the Arapaho property value. If the property is selected for an exchange under this alternative, a three-way exchange between the successful applicant, TNC, and the Service would provide this inholding without requiring additional funding. Once appraised, if the value of lands is in excess of the exchange, it is anticipated the TNC will work with the Service to transfer the property in phases over several years.

2.5 Alternative D - Expand the Administrative Boundary of the Refuge and Complete a Land Exchange for Holdings at Other Refuges in Colorado

A combination of Alternative B and Alternative C could be derived whereby the Service would complete land acquisition planning to expand Rocky Flats NWR and use the Service's preexisting exchange authority to add lands to either the Arapaho NWR located in Jackson County, Colorado, or the Baca NWR in Alamosa and Saguache Counties, Colorado. Such a decision would be based upon a determination that further land protection is required at Rocky Flats NWR, but that the urgency of land protection at these alternate locations is greater, or that land acquisition at the Refuge falls on a different timeline than is necessary to properly dispose of the transportation corridor.

2.6 Alternatives Considered but Eliminated from Further Analysis

Return Management Authority Over Certain Lands to the Department of Energy

The Rocky Flats Act required the Secretary of Energy to be responsible for disposal of the transportation corridor. The transportation corridor was contemplated in the Corrective Action Decision/Record of Decision for the Rocky Flats Plant Peripheral Operable Unit and Central Operable Unit and lands were transferred to the Service in 2007 (DOE 2006). This alternative would require that management authority over lands be transferred back to DOE. Transfer of management authority from FWS to DOE is not in the interest of any party and would result in increased overall costs.

Retain Transportation Corridor Lands

Section 3174 of the Rocky Flats National Wildlife Refuge Act of 2001 requires the Service to make land available by easement or sale to one or more entities. Such a sale must be in accordance with the conditions described by the Rocky Flats Act and may not extend beyond 300 feet from the west edge of the Indiana Street transportation corridor. Since the establishment of the Refuge, clear legislative direction has been provided which indicates that the Service must make these lands available for the purpose of transportation improvements along Indiana Street. An alternative to retain the eastern edge of the Refuge is contrary to congressional intent.

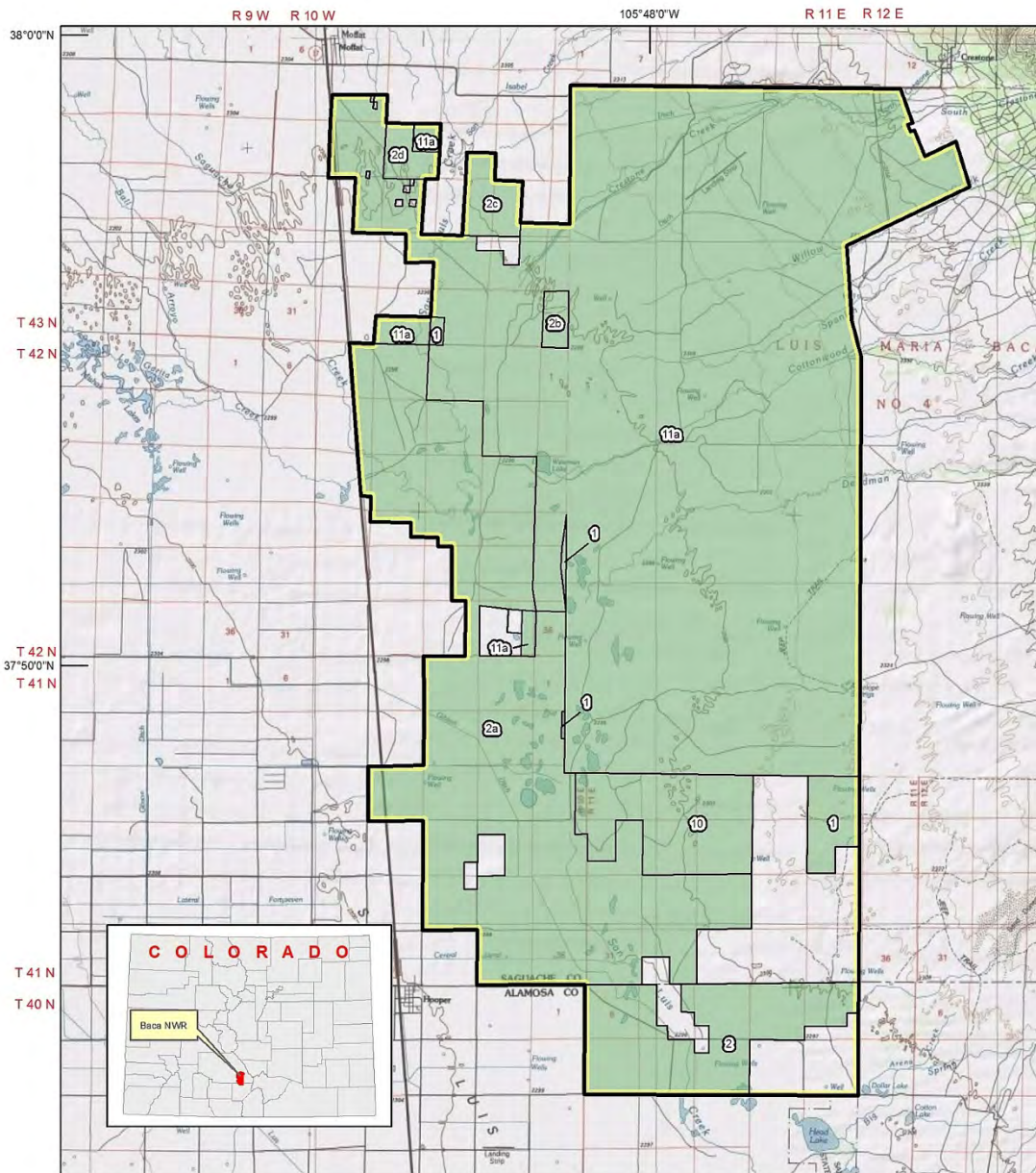


U.S. Fish & Wildlife Service

Baca National Wildlife Refuge

Alamosa and Saguache Counties, Colorado

Land Status



PRODUCED IN THE DIVISION OF REFUGE PLANNING
DENVER, COLORADO
LAND STATUS CURRENT TO: 2/18/10
MAP DATE: 2/18/10
BASEMAP: DRG 24K
NEW MEXICO PRINCIPAL MERIDIAN
FILE: W:\CO\BACMAPS\BAC_BND.MXD
NOTE: ALL PREVIOUS MAPS ARE OBSOLETE



UTM ZONE 13
NAD 83

Baca NWR including inholdings

Disallow Transportation Improvements along Indiana Street

Section 3174 of the Rocky Flats National Wildlife Refuge Act of 2001 requires the Service to make land available by easement or sale to one or more entities. Such a sale must be in accordance with the conditions described by the Rocky Flats Act and may not extend beyond 300 feet from the west edge of the Indiana Street transportation corridor. Since the establishment of the Refuge, clear legislative direction has been provided that the Service must make these lands available for the purpose of transportation improvements along Indiana Street. Once sold, the Service would be required to monitor any transportation improvement project to ensure minimal adverse effects on the management of the Refuge; would review any wetlands or other habitat mitigation plans that may be required; would consult on any project that may affect a threatened or endangered species, such as the Preble's meadow jumping mouse. However, the Service does not believe it can or should disallow transportation improvements along Indiana street.

Expand the Administrative Boundary of the Refuge and Direct Sale of the Transportation Corridor

A combination of Alternative A and Alternative B could be derived whereby the Service would complete land acquisition planning to expand the Refuge and dispose of the transportation corridor by direct sale. Analysis of potential impacts associated with disposal of lands within 300 feet of Indiana Street is included as a part of the Refuge's 2004 EIS. If the decision is made to pursue a direct sale of the transportation corridor, the Service would not continue its action of planning for an expansion of the Refuge because the funds derived from the sale would go to the Treasury and could not be used for the expansion.

Retain a Limited Interest in the Transportation Corridor

As described previously, the Service must make lands available for transportation improvements along Indiana Street. The Rocky Flats Act states that lands must be made available by sale or easement. The Service's land acquisition policy, 341 FW 1.3A(1), states that when lands are to be acquired, the minimum interest necessary to reach management objectives is to be acquired or retained. The Refuge's 2004 EIS discusses possible transportation improvements near the Refuge and displays the potential resource impacts associated with a range of options. This analysis shows that these lands are not essential in achieving the purposes for which the Refuge was established and the Refuge would not benefit from retaining an interest in these lands.

3.0 Affected Environment

This chapter describes the physical, biological, cultural, and socioeconomic resources most likely to be affected by the proposed land exchange and expansion of Rocky Flats NWR, with a brief summary of Baca and Arapahoe NWRs. For additional information on lands elsewhere in Colorado that are proposed for exchange under Alternatives C and D, please reference the conceptual and current Comprehensive Conservation Plans for the Baca NWR and Arapaho NWRs, at http://www.fws.gov/mountain-prairie/planning/plans_co/index.html.

3.1 Physical Environment

This section describes the physical features of the Rocky Flats NWR and adjoining land within the proposed boundary expansion, including geology, climate, and anticipated climate change.

Physiographic and Geological Features

The Rocky Flats NWR sits at the interface of the Great Plains and Rocky Mountains, about 2 miles east of the foothill escarpment in Jefferson County, Colorado. The elevation of the Refuge ranges from 5,500 feet in the southeastern corner to 6,250 feet on the western edge of the adjacent section 16 property. The western half of the site is characterized by the relatively flat Rocky Flats pediment, which gives way to several finger-like drainages that slope down to the rolling plains in the eastern portion of the site.

Geological units at the Rocky Flats site range from unconsolidated surficial deposits to various bedrock layers. Surficial deposits in the western portions of the site are characterized by Rocky Flats Alluvium, clayey and sandy gravels up to 100 feet thick. The steeper slopes below the Rocky Flats Alluvium in the central portion of the site generally consist of landslide deposits. Surficial deposits in the eastern portion of the refuge consist of colluvium 3 to 15 feet thick and terrace alluvium 10 to 20 feet thick (Shroba and Carrara 1996).

Mineral resources

The Rocky Flats Alluvium is believed to be the only mineral resource feasible for development at the Refuge. Historically, uranium, coal, oil and natural gas have been extracted near the Rocky Flats site. At present, mineral leases for Rocky Flats Alluvium are held within the proposed acquisition on section 16, as well as within DOE-administered properties within the current approved acquisition boundary.

Soils

The soils at the site formed from alluvium (stream deposited), colluvium (gravity deposited), or residuum (bedrock material that weathered in place). Soils in the western half of the site formed from alluvium, while those in the eastern half of the site formed from colluvium and residuum. Soils in the western half of the site are primarily the Flatirons and Nederland soils that formed in the Rocky Flats Alluvium (Figure 5). Flatirons soils consist of very cobbly to very stony loamy surface soils and clayey subsoils. These soils are deep and well drained. Flatirons soils are located on western pediments and ridgetops, as well as the upper portions of hillsides. Nederland soils have very cobbly loamy surface and subsoils. They